

TABLE 1.—IMPORT AND EXPORT THRESHOLD LIMITS—Continued

Radioactive material	Category 1		Category 2	
	Terabequerels (TBq)	Curies (Ci) ¹	Terabequerels (TBq)	Curies (Ci) ¹
Ytterbium-169	300	8,100	3.0	81

¹The values to be used to determine whether a license is required are given in TBq. Curie (Ci) values are provided for practical usefulness only and are rounded after conversion.

²The limits for Pu-238 and Pu-239/Be in this table apply for imports to the U.S. The limits for exports of Pu-238 and Pu-239/Be can be found in § 110.21.

Calculation of Shipments Containing Multiple Sources or Radionuclides

The “sum of fractions” methodology for evaluating combinations of radionuclides being transported, is to be used when import or export shipments contain multiple sources or multiple radionuclides. The threshold limit values used in a sum of the fractions calculation must be the metric values (*i.e.*, TBq).

I. If multiple sources and/or multiple radionuclides are present in an import or export shipment, the sum of the fractions of the activity of each radionuclides must be determined to verify the shipment is less than the Category 1 or 2 limits of Table 1, as appropriate. If the calculated sum of the fractions ratio, using the following equation, is greater than or equal to 1.0, then the import or export shipment exceeds the threshold limits of Table 1 and the applicable security provisions of this part apply.

II. Use the equation below to calculate the sum of the fractions ratio by inserting the actual activity of the applicable radionuclides or of the individual sources (of the same radionuclides) in the numerator of the equation and the corresponding threshold activity limit from the Table 1 in the denominator of the equation. Ensure the numerator and denominator values are in the same units and all calculations must be performed using the TBq (*i.e.*, metric) values of Table 1.

R₁ = activity for radionuclides or source number 1

R₂ = activity for radionuclides or source number 2

R_N = activity for radionuclides or source number n

AR₁ = activity limit for radionuclides or source number 1

AR₂ = activity limit for radionuclides or source number 2

AR_N = activity limit for radionuclides or source number n

$$\sum_1^n \left[\frac{R_1}{AR_1} + \frac{R_2}{AR_2} + \frac{R_n}{AR_n} \right] \geq 1$$

[70 FR 37993, July 1, 2005]

PART 140—FINANCIAL PROTECTION REQUIREMENTS AND INDEMNITY AGREEMENTS

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140.109 Appendix I.

AUTHORITY: Secs. 161, 170, 68 Stat. 948, 71 Stat. 576 as amended (42 U.S.C. 2201, 2210);

secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Pub. L. 109-58.

SOURCE: 25 FR 2944, Apr. 7, 1960, unless otherwise noted.

Subpart A—General Provisions

§ 140.1 Purpose.

The regulations in this part are issued to provide appropriate procedures and requirements for determining:

(a) The financial protection required of licensees and for the indemnification and limitation of liability of certain licensees and other persons pursuant to section 170 of the Atomic Energy Act of 1954, as amended; and

(b) The liability insurance required of uranium enrichment facility licensees pursuant to section 193 of the Atomic Energy Act of 1954, as amended.

[57 FR 18394, Apr. 30, 1992]

§ 140.2 Scope.

(a) The regulations in this part apply:

(1) To each person who is an applicant for or holder of a license issued pursuant to 10 CFR parts 50 and 54 of this chapter to operate a nuclear reactor, and

(2) With respect to extraordinary nuclear occurrences, to each person who is an applicant for or holder of a license to operate a production facility or a utilization facility, and to other persons indemnified with respect to such facility.

(3) To each person licensed pursuant to part 70 of this chapter to possess and use plutonium in a plutonium processing and fuel fabrication plant.

(4) To each person licensed pursuant to parts 40 and 70 of this chapter to construct and operate a uranium enrichment facility.

(b)(1) Subpart B of this part does not apply to any person subject to subparts C or D of this part. Subpart C of this part applies only to persons found by the Commission to be Federal agencies. Subpart D of this part applies only to persons found by the Commission to be nonprofit educational institutions with respect to licenses and applications for